

How to Use LOCAD?

The current LOCAD technology, the LOCAD-Portable Test System (LOCAD-PTS), based on the Endosafe-PTS® manufactured by Charles River Laboratories, is specifically designed and FDA-approved to monitor water and finished pharmaceutical products for microbial molecules. NASA has modified this commercial-off-the-shelf (COTS) technology for its future exploration needs.

One of these applications is monitoring the surface contamination levels of outbound spacecraft prior to launch. The method for detecting bacteria that is used by the LOCAD-PTS has been approved by NASA's Planetary Protection division for this specific use. Additionally, this technology is applicable to ensuring that water for injection into astronauts is sterile while they are on future long duration missions to the moon and Mars. Currently, two LOCAD-PTS units are onboard the International Space Station (ISS) as science and technology demonstration units, collecting information about the distribution of microbial molecules on ISS surfaces.

Additional information on current and future uses of the LOCAD technologies is available on the [Value and Benefits](#) page.



LOCAD-PTS used to verify the cleanliness of the surface of a probe prior to launch as a planetary protection measure.